

Beyond Translation: Building Robust Bilingual AAC with Minspeak®

Cindy Halloran, OTR/L, Director, Center for AAC and Autism

Debbie Witkowski, MA, CCC-SLP, Training and Implementation Specialist, Minspeak Academy

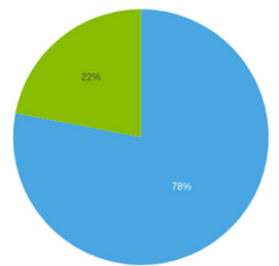
Closing the Gap
October 13, 2025

Bilinguals in the U.S.

22% of individuals in the US speak another language in addition to English.

13.1% of the U.S. population speaks Spanish at home (most common home language).

1.1 % of the U.S. population speaks Mandarin at home (second most common).



Bilingual Language Acquisition

Bilingual language acquisition can be simultaneous or sequential.



Simultaneous Language Acquisition - A child is exposed to and learns two or more languages from birth or within the first few years of life, resulting in the development of two comparable but distinct language systems, similar to the development of a monolingual child's first language.

Sequential Language Acquisition - A child is exposed to and learns a second language after a first language has been established. In many cases, the first language is the home language and the second language is the language of instruction.



Bilingual language acquisition can be seen as additive or subtractive.

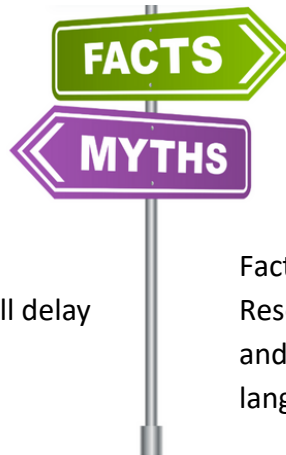


Additive bilingualism occurs when a person learns a second language without losing proficiency or value in their first language. Both languages are supported and seen as assets.



Subtractive bilingualism occurs when learning a second language leads to the erosion or loss of the first language, often because the first language is undervalued or unsupported.

Bilingual Language Acquisition (cont.)



Myth:

Learning two languages with AAC will delay language development.

Fact:

Research shows that AAC users benefit cognitively and socially from exposure to and learning both languages.

Benefits of Bilingualism

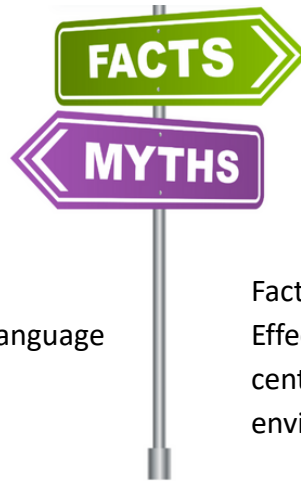
- Cognitive Abilities - Enhances executive functioning, problem-solving, and mental flexibility
- Culture Identity - Strengthens cultural pride and self-esteem
- Academic Success - Supports literacy and improves academic performance
- Culture Identity - Facilitates communication in diverse settings and increases career opportunities

Understanding Vocabulary Gaps



For bilingual language learners, particularly sequential learners, different types of vocabulary will be acquired in different environments based on what is relevant in each context. This leads to distributed knowledge between the two languages with words related to home, family, and daily routines being learned in the home language and academic words being learned in the language of instruction. This can make it appear as if bilinguals have gaps in their vocabulary knowledge if they are assessed in only one language. Assessment in both language results in higher outcomes.

Maintaining the Home Language



Myth:

Intervention should focus only on the language used in school.

Fact:

Effective AAC intervention should be person-centered, supporting communication across environments.

Why Maintain the Home Language?



Being able to communicate in the home language strengthens relationships with family members, especially older generations who may not speak the dominant language. It also helps maintain ties within cultural communities and support networks.

Bilingualism enhances cognitive flexibility, problem-solving skills, and creativity.

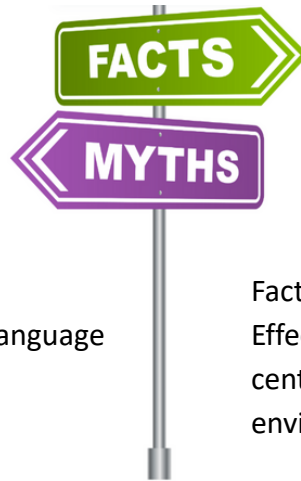
“A life experience of juggling two languages appears to create expertise in resolving cognitive conflict.” Ellyn Bialystok

Maintaining both languages can improve academic performance, especially in literacy and language-related subjects.



Being able to express oneself in the language they feel most comfortable with supports emotional health and self-esteem. It can reduce feelings of isolation or identity conflict, especially in children growing up in multilingual households.

Bilingual AAC



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Fact:

Effective AAC intervention should be person-centered, supporting communication across environments.

Language Translation vs. Language System

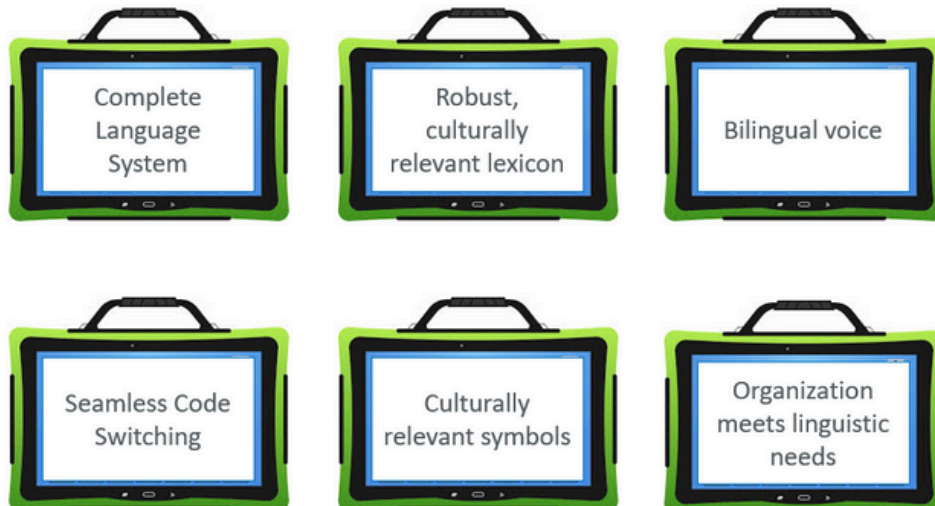


A translation uses an English AAC system as the base for other languages without consideration of linguistic differences. English word organization is maintained in the second language.

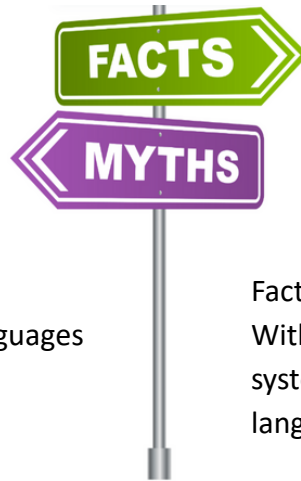


A robust language system gives consideration to the linguistic elements and semantic differences in the second language. The second language could stand alone as a robust monolingual AAC option.

Robust Bilingual AAC Components



Bilingual AAC (cont.)



Myth:
AAC devices can't support multiple languages effectively.

Fact:
With careful consideration, robust bilingual AAC systems are designed to support multiple languages effectively.

Guiding Principles of Minspeak Systems

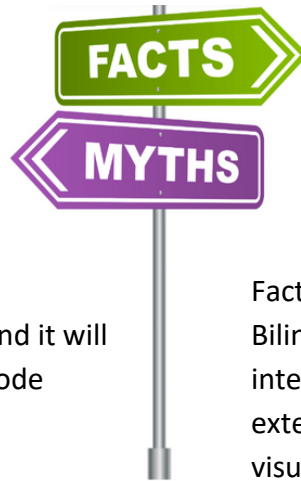
Prioritize single words which lead to generative language.

Efficient access to core vocabulary since it's used with the highest frequency.

Unique motor plans for words to promote the development of motor automaticity.

Vocabulary organized into word families. Words that are used together are programmed under the same symbol.

Features to Support Bilingual AAC



Myth:

Bilingual AAC users can't code switch and it will be too hard for them to learn how to code switch on an AAC device.

Fact:

Bilingual preschool-age children can map their internal representation of two languages to an external AAC tool where those languages are visually differentiated.

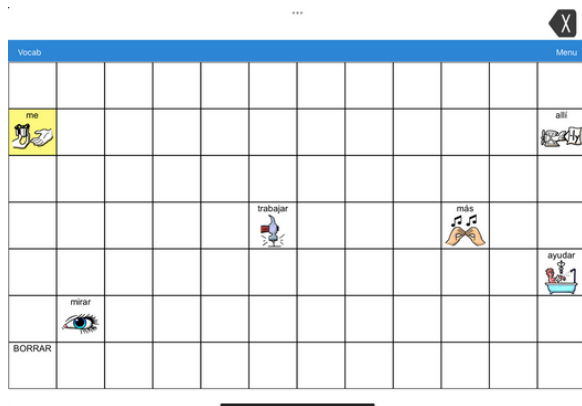
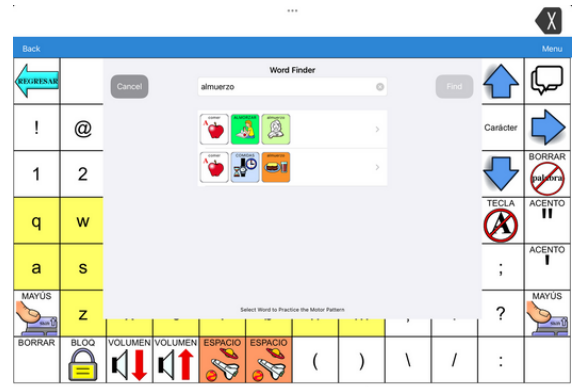
Code switching, or moving between two languages while engaged in a conversation, is made possible because the text in the message area is maintained as the user toggles between languages. Words are pronounced correctly in each language.



Bilingual voices enable an AAC user to have the same voice whether they are speaking in English or Spanish.

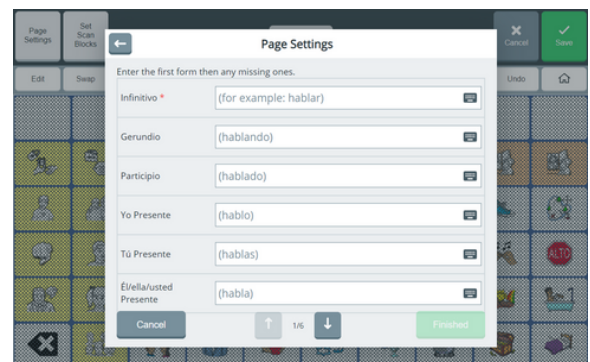
Features to Support Bilingual AAC

Since in most cases, a word has the same sequence, and therefore the same motor plan, in English as in Spanish or French, a non-language speaker can look up a word in the known language and use that information to locate the word in the second language.



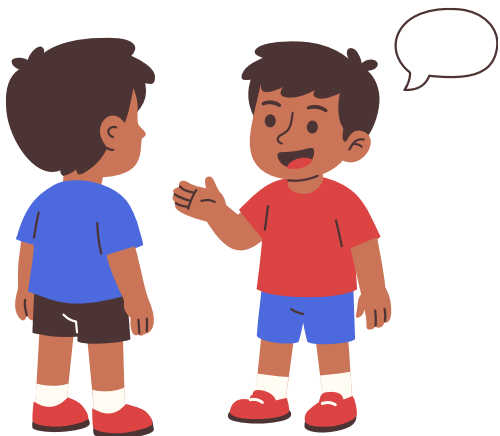
Vocabulary Builder allows you to temporarily limit the vocabulary within the software so that specific words and patterns can be taught. Setting up Vocabulary Builder in English and Spanish helps learners to how to say the words in each language.

To add a verb in a Minspeak system is to add all of its tenses. In Spanish, for example, that is 42 verb forms. The Add a Verb tool enables you to add the infinitive form of the verb, and if the verb is in the system dictionary, all of the tenses will populate automatically.



Language Acquisition and Motor Automaticity

Motor Learning - Practice to learn a skilled task with a goal in mind



All communication involves a motor component. In typical speech, articulation is fluent and happens without cognitive effort. In AAC, the motor movement to produce a word also has to happen without cognitive effort for communication to be fluent.

Stages of Motor Learning

Cognitive - effort is required to learn

Associative - less intentional effort is required, some mistakes occur

Automatic - little/no effort is required, movement is consistent and efficient



Language Acquisition and Motor Automaticity (cont.)

Automaticity in AAC is possible in AAC when the same motor movement *always* produces the same sound.



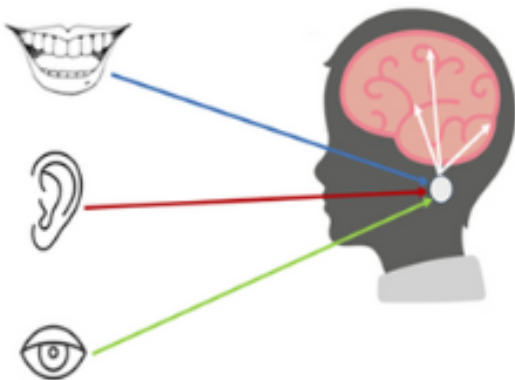
Benefits of Motor Automaticity

- Attention can be directed to content & social aspects of communication exchange
- Increased rate of communication

How Minspeak systems contribute to the development of motor automaticity:

- Consistent motor sequence to say individual words
- Access to robust language with tools allows for simplification for early learners to keep motor plans consistent with vocabulary growth
- Consistent pattern for word endings allows for grammar to become automatic

Multisensory Integration and Auditory Processing



- Neurons that fire together wire together
- Information from one sense will fire other areas of the brain
- Provides depth to experiences
- In speech, the motor movement and the sound it produces are wired together which aids in auditory processing
- Visual information is wired in when we watch others speak as we listen to them.